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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/196,013	11/19/98	KOMA	N 5586D-7076

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EXAMINER

NGUYEN, F

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 08/27/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/196,013

Applicant(s)
NORIO KOMA

Examiner
FRANCIS NGUYEN

Art Unit
2674



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Jun 18, 2001

2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1, 3-5, and 7-17 is/are pending in the applica

4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1, 3-5, and 7-17 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirem

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☒ The proposed drawing correction filed on Jun 18, 2001 is: a) ☒ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☐ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4

20) ☐ Other:

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DETAILED ACTION

Response to Amendment

1. The amendment filed on 6/18/2001 is entered. The proposed drawing correction filed on 6/18/2001 is entered and approved by the examiner.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation "separately subjected gamma correction" must be shown or the feature(s) canceled from the claim(s) 3 and 7. No new matter should be entered.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by McKnight (U.S. Patent 6,144,353).

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5. As to **claim 1**, McKnight discloses a liquid crystal display(**LCD system 12**, column 8, lines 48-51) having liquid crystal sandwiched between a pair of substrates (**electro-optic layer 22**, figure 1A, column 3, line 61) having electrodes (**pixel electrode 28** and **common electrode 26**, column 8, lines 56-64) for driving the liquid crystal based on respective R, G , and B signals (figure 2C, **three different driving waveforms 154/155/156**) to control transmittance of each of the R light component, G, and B light components for color display, wherein each of upper limit values of ranges for driving voltages respectively for R display , G display, and B display(display of **first color subframe, second color subframe** and **third color subframe**, figures 3A and 3B) . Note **figure 2C** indicates the intensity R/G/B display at t2, t4 and t6, and control voltages of common electrode Vcg, also overdrive voltage (column 9, lines 62-63). Note the corresponding one-to-one relationship between driving voltage and intensity as illustrated in figure 2B and note the separate display of R-light, G light, B light in figure 2C . **Therefore, the ground of rejection is maintained.**
6. As to **claim 5** , note the same citations for claim 1.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 3, 4, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKnight in view of Sawada (U.S. Patent 6,078,317).

9. As to **claims 3 and 7**, McKnight fails to teach gamma correction. Sawada discloses gamma characteristic adjustment circuit 19(figure 1, column 6, lines 63-65) for LCD display. **It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of McKnight then add a gamma adjustment circuitry, as taught by Sawada, to obtain the combined apparatus McKnight-Sawada , because it would result in proper luminance on LCD display.** The ground of rejection is maintained.

10. As to **claims 4 and 8**, McKnight-Sawada does not expressly teach poly-Si TFT. However, fabrication and application to Active Matrix LCD is well known in the art at the time of the invention. **It would have been obvious to a person of ordinary skill in the art to make use of poly-Si TFT as switching elements in the apparatus of McKnight-Sawada because it would result in increased aperture ratio, production yield and increase of pixel density in LCD display.** The ground of rejection is maintained.

11. As to **claims 9-17**, see the same citations above. The ground of rejection is the same as that of **claims 1, 3-5, 7-8.**

Response to Arguments

12. Applicant's arguments filed on 6/18/2001 have been fully considered but they are not persuasive.

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As to claims 1, 3-5, 7-8, Applicant's argument lack of teaching from prior art of R, G and B driving voltage independently set for R, G, B light is not valid since R, G and B light intensities are displayed independently as shown in figure 2C. Note the one-to-one relationship between the driving voltage and the light intensity shown in figure 2B, note the upper voltage value in figure 7A top portion, and intensity display in lower portion of figure 7A. The examiner reminds the Applicant that if there is no evidence of R/G/B driving voltage, how can R/G/B intensity be displayed? Therefore, the ground of rejection is maintained.

As to new claims, the examiner counts on combination of cited art McKnight in view of Sawada for 35 USC 103 rejection. Therefore, the ground of rejection is maintained.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francis Nguyen whose telephone number is (703) 308-8858. The examiner can normally be reached on weekdays from 8:00 AM to 4:30 PM.

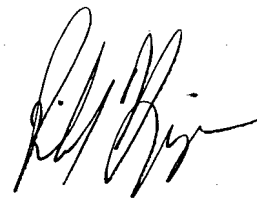
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.



Francis Nguyen

August 24th, 2001



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600